

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-13 are presently active; Claims 1-3 and 9 have been presently amended; and Claims 12 and 13 have been presently added. The features presented for consideration in this amendment are shown in Applicant's Figure 3.

In the outstanding Office Action, Claims 1, 2, and 4-11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Shiraishi (U.S. Pat. No. 5,838,479). Claim 3 was objected to for being dependent from a rejected base claim but would be allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims.

Firstly, Applicants acknowledge with appreciation the indication of allowable subject matter in Claim 3. To expedite prosecution, Claim 3 has been rewritten in independent form to include the limitations of Claims 1 and 2.

Secondly, Applicants acknowledge with appreciation the courtesy of Examiner Cherry to interview this case on August 11, 2005, the substance of which is substantially summarized herebelow.

During the interview, element 25 in Shiraishi associated in the Office Action as a lens was identified as an element that does not take in light, but rather was recognized as a mirror that reflects light. While Examiner Cherry acknowledged this point, other components in Shiraishi in her view could constitute a lens that takes in light and divides the light into a number of beams. However, as discussed and agreed to during the interview, Shiraishi does not seem to show a two-stage optical deflection unit. Accordingly, amended Claims 1 and 9 define a two-stage optical deflection unit.

Regarding independent Claims 1 and 9, the deflection reflecting surface of the optical deflection unit (for example, a polygon mirror) according to Claims 1 and 9 is separated into

two or more reflecting surfaces in the direction of rotation axis (recited in claims as “the optical deflection unit having two or more surfaces”). Shiraishi discloses only a one-tier polygon mirror. Applicant submits that such a mirror can hardly reduce (nor can the mirror stabilize) the spot diameter because of its large angle of incident beam. Thus, the mirror disclosed in Shiraishi differs from the polygon mirror of Claims 1 and 9.

Regarding Claim 2, light beams entering into the optical deflection unit of Claim 2 includes (1) an orthogonal beam, which is orthogonal to the axis of rotation of the optical deflection unit, and (2) an oblique beam, which is oblique to a plane that is orthogonal to the axis. In Shiraishi, all of the light beams are oblique incident beams. As a result, Applicant submits that Shiraishi can hardly reduce or stabilize the spot diameter because of the large angle of the incident beam.

Regarding Claim 4, the optical scanner of Claim 4 includes a multi-tier lens obtained by stacking a plurality of lenses. As noted above, Shiraishi discloses only a one-tier lens. Applicant submits that such a lens (especially, which is manufactured by plastic molding and processing) can hardly achieve high surface accuracy, because of its thickness in the vertical scanning direction. In addition, Applicant submits that it takes long time to form a one-tier lens, thereby increasing cost.

Regarding Claims 5 and 6, the optical scanner of Claims 5 or 6 includes a plurality of optical path separation mirrors, at least one of which reflects one or more of the deflected optical beams and transmits another one or more of the deflected optical beams. Even when the angle of incident beam in the vertical scanning direction is set small, the separation mirror can separate the incident beam into a plurality of beams corresponding to U, M, C, and K, respectively, thereby reducing the deterioration of optical characteristic (especially, the spot diameter) due to oblique incidence. Applicant submits that Shiraishi cannot reduce such a

deterioration because of its lack of separation mirror having a reflection and transmission function.

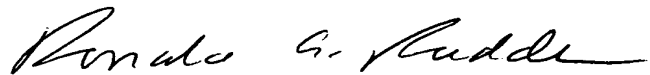
Regarding Claims 7 and 8, the bending optical system of Claims 7 and 8 includes at least one lens that is mounted so as to have an eccentric surface tilted in a vertical scanning direction. As a result, the bend of the scanning line and the wave front aberration can be corrected, thereby reducing and stabilizing the spot diameter. Applicant submits that Shiraishi cannot correct the bend of the scanning line nor the wave front aberration, and therefore cannot reduce nor stabilize the spot diameter, because of the lack of an eccentric surface tilted in the vertical scanning direction.

Given these distinctions of the claimed inventions from Shiraishi, it is respectfully submitted that independent Claims 1 and 9 and the claims dependent therefrom patentably define over Shiraishi.

Consequently, in view of the present amendment and in light of the above discussions, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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